

**Social Worker Integrated Care Competencies Scale (SICCS):
Assessing Social Worker Clinical Competencies for Health Care Settings**

Tamara S. Davis, PhD, MSSW (corresponding author)

Dean and Professor
School of Social Work
Indiana University
1947 College Road
Education/Social Work Building
902 W. New York St., ES4138C
Telephone: (317) 274-8362
Fax: (317) 274-8630
Email: tamsdavi@iu.edu

Rebecca Reno, PhD, MSW, MA
Post-Doctoral Fellow
School of Public Health
University of California, Berkeley
2199 Addison St., Suite 435
Berkeley, CA 94710
(614) 354-5201
rmreno@berkeley.edu

Joe Guada, PhD, MSW
Associate Professor
College of Social Work
The Ohio State University
1947 College Road
Columbus, OH 43210
(614) 247-8967
guada.1@osu.edu

Staci Swenson, MSW, LISW-S
Director of Behavioral Health and Social Work
PrimaryOne Health
2780 Airport Drive, Suite 100
Columbus, OH 43219
(614) 859-1881
Staci.Swenson@primaryonehealth.org

Adriane Peck, MSW, LISW-S
Integrated Care Program Manager
College of Social Work
The Ohio State University

This is the author's manuscript of the article published in final edited form as:

Davis, T. S., Reno, R., Guada, J., Swenson, S., Peck, A., Saunders-Adams, S., & Haas-Gehres, L. (2019). Social Worker Integrated Care Competencies Scale (SWICCS): Assessing social worker clinical competencies for health care settings. *Social Work in Health Care*, 58(1), 75–92. <https://doi.org/10.1080/00981389.2018.1547346>

1947 College Road
Columbus, OH 43210
(614) 292-0728
peck.274@osu.edu

Stacey Saunders-Adams, PhD, MSSA, LISW-S
Assistant Professor
School of Social Work
Ohio University
Athens, OH 43210
(614) 292-4050
saunders-adams.1@ou.edu

Lauren Haas-Gehres, MSW
College of Social Work
The Ohio State University
1947 College Road
Columbus, OH 43210
(614) 247-7385
haas-gehres.1@osu.edu

NOTES

Authors were employed at The Ohio State University during the period of study.

ACKNOWLEDGEMENTS

The authors thank PrimaryOne Health (formerly Columbus Neighborhood Health Center) for its support and participation in this workforce development field education effort. The authors also thank Laura Moskow Sigal and Heather Stumpf, formerly of Mental Health America of Franklin County for their contributions during the program's formative stages.

FUNDING

Funding was provided as part of the Healthcare Access Initiative of Ohio Medicaid Technical Assistance and Policy Program (MEDTAPP), the Rust Foundation, and The Ohio State University College of Social Work.

Abstract

Integrating physical and behavioral health services has the potential to reduce health disparities and service inequities among persons most at risk. However, clinical social workers in integrated health settings must possess relevant knowledge and skills to provide quality care to diverse populations. The Social Worker Integrated Care Competency Scale (SWICCS), developed to complement the Integrated and Culturally Relevant Care (ICRC) field education curriculum, measures students' self-perceptions of knowledge and skills associated with providing behavioral health care. Three student cohorts ($n=38$) completed the SWICCS three times during an integrated care field practicum. Results indicated a statistically significant increase in student knowledge and skills at each time point, with a large effect size ($r = -0.87$). The SWICCS demonstrated utility in measuring and tracking social work student acquisition of knowledge and skills required for practice in integrated care environments.

Keywords

Social work, integrated care, behavioral health, interprofessional competencies, measure

Abstract

Integrating physical and behavioral health services has the potential to reduce health disparities and service inequities among persons most at risk; however, integrated care requires behavioral health clinicians to possess relevant knowledge and skills to provide quality care to diverse populations. The Integrated and Culturally Relevant Care (ICRC) field education curriculum model for clinical social work students was developed to meet this need. The complementary Social Work Integrated Care Competency Scale (SWICCS), collaboratively developed with community health center providers, measures students' self-perceptions of knowledge and skills development associated with providing behavioral health services. This study included three student cohorts ($n=38$) who completed the SWICCS three times during their field placement. The SWICCS demonstrated a statistically significant increase in student knowledge and skills at each time point, with a large effect size ($r = -0.87$). A corresponding supervisor version of the SWICCS reflected significantly lower ratings than student self-ratings, suggesting students may be more aware of their ability than mastery of the competencies. This study demonstrates the utility of the SWICCS to measure and track the progressive acquisition of requisite knowledge and skills needed to provide behavioral health services in an integrated health care environment.

Keywords

Social work, integrated care, behavioral health, interprofessional, competencies, measurement

**The Social Work Integrated Care Competencies Scale (SWICCS):
Assessing Behavioral Health Clinical Competencies for Health Care Settings**

Introduction

The Affordable Care Act's promotion of integrating mental and physical healthcare (Croft & Parish, 2013) resulted in expanded efforts to integrate behavioral health services as part of primary care across the United States. This push came not only from opportunities arising through the Affordable Care Act and Medicaid Expansion, but also from increasing recognition that integrated care has the potential to decrease health and mental health disparities (Grantmakers In Health and Hogg Foundation for Mental Health, 2013; Kocher, Emanuel & DeParle, 2010; Miller, Talen & Patel, 2013; Shim, Ye, Baltrus, Fry-Johnsons, Daniels, & Rust, 2012).

According to Robinson and Reiter (2016), approximately 21% of those with diagnosable mental health disorders will seek care for their condition via their primary care physician or other medical provider. They suggest that almost 60% of individuals with a diagnosable mental health disorder will never seek care at all for their mental health issue; however, approximately 80% of the population will receive care from a primary care physician (PCP) at some point in their lifetime. Medical education prepares physicians to treat mental health conditions with medication or to make a referral when many other, nonmedical evidence-based treatments and resources are available (Unützer, Schoenbaum, Druss, & Katon, 2006; Wiest et al., 2002). Robinson and Reiter (2016) and others argue that to meet the needs of people with mental health disorders, behavioral health clinicians must partner with PCPs as a means to access, identify, and treat those with undiagnosed or poorly managed mental health issues.

The literature around social determinants of health points to issues with access to mental health care due to poverty, lack of transportation, general access to services, or lack of health insurance (Kocher et al., 2010; Miller et al., 2013; Shim et al., 2012). This phenomenon disproportionately affects low-income, aging, uninsured, rural, racial, ethnic, and culturally diverse populations (Wang, et al., 2005). Moreover, stigma related to mental illness is stronger in diverse populations such as older African American (Connor, et al., 2010) and Latino populations (Vega, Rodriguez, & Ang, 2010) than among racially White groups. Even when open to receiving behavioral health care, inequities in care for diverse ethnic and racial groups often prevail. For example, physicians are notably less likely to detect depressive symptoms among African American and Latino patients than with their White counterparts (Borowsky, et al., 2000; Lukachko & Olfson, 2012).

Integrated care is becoming a widely implemented health care approach to increase access to mental health services for underserved populations or those who seek treatment for mental health diagnoses from their PCP (Thielke, Vannoy, & Unutzer, 2007; Valentijn, Schempman, Opheij, & Bruijnzeels, 2013). Integrated care refers to care wherein a team of providers—PCPs and behavioral health included—partner to identify and address the complex medical and behavioral health needs of patients (Peek, 2013). Moreover, the ACA encouraged states to experiment with models of integrated behavioral health and primary care as a means to improve outcomes and reduce costs of care (Wotring & Stroul, 2011). These team-based approaches to care require behavioral health clinicians to have skills in providing culturally-relevant care in a fast-paced environment, using screening, assessment, and intervention methods that are often outside of traditional behavioral health practices. Accordingly, the field needs to

define and assess critical practitioner competencies necessary to work as a behavioral health clinician in an integrated care setting (Hoge, Tondora, & Marrelli, 2005).

Federal and state agencies have launched programs to develop a behavioral health workforce skilled to address the needs of high-need, high-demand, or underserved populations. One such program, the Medicaid Technical Assistance and Policy Program (MEDTAPP) is funding multiple initiatives to develop a skilled workforce committed to working in high-volume Medicaid settings. Another program, funded under the Affordable Care Act and administered by the U.S. Department of Health and Human Services, Health Resources, and Service Administration (HRSA), funded graduate social work and psychology programs through the Behavioral Health Workforce Education and Training (BHWET) program intending to strengthen clinical competencies for those pursuing work with underserved populations (Rishel & Hartnett, 2015). Programs such as these highlight the continued need for skilled behavioral health clinicians to meet the needs of diverse populations served through the safety net system. Hence, preparing behavioral health clinicians requires valid and reliable instruments to assess their knowledge, skills, and readiness to work as part of interdisciplinary medical teams.

The Integrated and Culturally Relevant Care (ICRC) field education training model (Davis, Guada, Reno, Swenson, Peck, Evans, et al., 2015) was developed and pilot tested to address this need. The model includes a curriculum and corresponding evaluative measures to demonstrate impact of the ICRC curriculum and field experiences on social work student competencies in providing integrated care. This paper describes the collaborative, iterative process of constructing the Social Work Integrated Care Competency Scale (SWICCS). It also demonstrates the effectiveness of the SWICCS in measuring knowledge and skills required by clinical social work trainees learning to practice behavioral health care in primary care settings.

Use of Behavioral Health Services in Primary Care Settings

Evidence of the potential benefits of integrating social workers into primary care offices dates back to the 1970s (Brochstein, Adams, Tristan, & Cheney, 1979; Lurie, 1977). More recently, de Saxe Zerden, Lombardi, Fraser, Jones and Garcia Rico (2017) and Fraser, Lombardi, Wu, de Saxe Zerden, Richman and Fraher (2016) described the expanding roles of social workers in health care settings and their critical function as part of healthcare teams. Studies explored the impact of integrating physical and behavioral health services, although the foci were often limited to specific age (e.g., aging populations), diagnostic groups (e.g., diabetes, depression), or to test specific interventions (Harris et al., 2012; Solberg et al., 2013). These studies are beneficial in that they demonstrate the potential of integrated care to address specific physical and mental health outcomes for targeted populations. However, the studies provide little guidance regarding the training behavioral health clinicians should receive—and the specific competencies behavioral health clinicians need—to function effectively in a primary care setting.

Developing Competence

Competency development among clinicians practicing in a variety of settings has received increased focus among behavioral health professions over the past decade. Psychology represents one discipline where recent scholarship highlights the needs for practice competencies. Wolfe (2014) identified particular practice competencies for Community Psychology necessary to reduce health disparities. Dobmeyer et al. (2003) discussed knowledge and skills psychology interns need to serve in an integrated care setting, including foundational knowledge related to generalist and health psychology and the ability to work on an interdisciplinary team. They identified specialist competencies, including knowledge of policies and procedures specific to health settings and skills in administering patient assessments and the

delivery of interventions. Finally, an effort by the American Psychological Association resulted in competencies with examples of behavioral anchors for psychologists practicing in primary care settings (APA, 2015). None of these described efforts includes a tool to assess clinician attainment of the identified competencies.

Rishel (2015) explored the specialized training clinical social workers need to be an indispensable part of an integrated health care team, advocating for a preventative approach to health as promoted by the Affordable Care Act (Rishel, 2015). She emphasizes mastery of competencies spanning from specific treatment modalities at the micro level, to knowledge about systems, and a willingness to advocate for populations at the policy level. Earlier work of Hoge, Tondura, and Morrelli (2005) cited *lists* of competencies or skills necessary to perform behavioral health services, but noted many of these tools lack a conceptual framework to reliably assess a student's or provider's knowledge or skills. Hoge et al. suggested that better understanding how behavioral health practice competence is defined and assessed might make competencies more meaningful to the field. In an effort to help guide the behavioral health field, the Substance Abuse and Mental Health Services Administration (SAMHSA) suggests competencies can serve to guide the development and implementation of a training program and to assess knowledge and ability of clinicians (SAMHSA, 2011).

At the core of integrated care is the concept that all providers must have the capacity to function effectively on an interdisciplinary team (de Saxe Zerden et al., 2017; Strosahl, 2005). Strosahl (2005) stressed how providing behavioral health services in a primary care environment differs from specialty mental health care agencies. For example, the pace of service delivery is much more rapid in a primary care environment, and all providers must be flexible in adapting to competing demands for patient time. In 2014, SAMHSA-HRSA (Health Resources & Services

Administration) published “Core Competencies for Integrated Behavioral Health and Primary Care” (Hoge, Morris, Pomerantz, & Farley, 2014). These competencies include nine domains with specific competency statements targeting both behavioral health and primary care practitioners, but again do not provide a corresponding assessment tool.

Integrated Care Competency Assessment Tools

With increased efforts to identify the critical competencies for behavioral health clinicians providing services in primary care settings, a need exists for standardized instruments to measure the acquisition of the requisite knowledge and skills to work as part of an integrated health care team. The Behavioral Health Consultant Core Competency Tool (BHCCC) (Robinson & Reiter, 2016) is one of few related published instruments and measures competencies of behavioral health *consultants* in a primary care setting. This tool includes a self-assessment and a supervisor-assessment of a consultant practitioner’s skills related to integrated care. It contains 53 items across six domains, using a rating scale of 1 (low) to 5 (high). The domains include: clinical practice skills, practice management skills, consultation skills, documentation skills, team performance skills, and administrative skills. It is important to note the competencies included in this instrument are limited to skills needed by behavioral health clinicians; it does not assess the clinical knowledge and skills necessary to provide competent behavioral health services. The BHCCC Tool has not yet been empirically tested or validated; it provides little instruction regarding the scoring of each item on the scale, making it difficult to understand if a low rating on the scale was a result of lack of knowledge or skill, poor execution, or some other organizational barrier.

The term *competencies* frequently describes a listing or inventory of knowledge, behaviors, skills, or abilities necessary to perform some job or task. Building on a definition of

competency proposed by Hartig, Klieme, and Leutner (2008), Shavelson (2010) suggests competence:

(1) is a physical or intellectual ability, skill, or both; (2) is a performance capacity to do as well as to know; (3) is carried out under standardized conditions; (4) is judged by some level or standard of performance as “adequate” “sufficient,” “proper,” “suitable,” or “qualified”; (5) can be improved; (6) draws upon an underlying complex ability; and (7) needs to be observed in real-life situations.
(p.44)

This definition highlights both knowledge and skills. Skills require a person to have a certain knowledge and understanding of why the skill is important, how to perform it, and when to perform it prior to actually being able to demonstrate the skill. Secondly, competence must be demonstrated under standardized conditions. These two aspects of competence imply that a person can be competent, but unable to demonstrate competence when conditions are not standardized or *normal* and that a person may have the knowledge, skill, and ability, but still choose not to perform a skill. Hence, tools developed to assess the competency of a behavioral health clinician to function in a primary care setting must have the capacity to identify the reasons the clinician does not perform competently. Further, it must be sensitive enough to capture differences in competence based on the practitioner’s opportunity to apply the skill. While efforts such as those described have helped to identify unique competencies for behavioral health clinicians working in integrated care settings, there remains a need for reliable and valid tools to assess clinician competence to work in complex primary care environments.

The ICRC field education training program and development of the Social Work Integrated Care Competency Scale (SWICCS) was underway prior to the aforementioned published efforts to establish competencies. Nonetheless, the core competencies specified in the ICRC training model closely align with those recently identified by the Council on Social Work Education, SAMHSA-HRSA, and other researchers (see Davis, Guada, Reno, Peck, Evans et al., 2015, for a detailed comparison). The researchers consulted the aforementioned publications during subsequent revisions to the ICRC training curriculum and SWICCS instrument, bringing even greater congruence between recommended competencies and the ICRC curriculum.

Methods

Developing the Social Work Integrated Care Competency Scale

We developed the SWICCS to assess the knowledge and skills of social work students completing the ICRC field education training model (Davis, Guada, Reno, Swenson, Peck, Evans, et al., 2015). The model prepares master's clinical social work students to work as part of a health care team to provide integrated and culturally relevant behavioral health services within a primary care setting. The training model utilizes licensed behavioral health clinicians to provide dedicated supervision to students, and all students receive specialized training in eight primary learning domains: Integrated Care, Technology in the Healthcare Environment, Assessment and Diagnosis, Care Coordination and Intervention Planning, Diversity, Documentation, Healthcare Basics, and Evidence-informed Behavioral Health Interventions.

Prior to developing the ICRC field education model and the SWICCS evaluative instrument, we conducted two extensive literature reviews, the first to identify any competencies that behavioral health specialists would need when working in an integrated setting. This review included journals from the fields of social work, nursing, psychology, psychiatry, and medicine,

among others. The second review identified existing instruments designed to measure the acquisition or demonstration of critical competencies for behavioral health specialists working in integrated health care settings. Most previously described sources outlining competencies for behavioral health clinicians were not available during the inaugural year of the ICRC training program. The reviews considered published research related to evidence-based practices, diversity, and behavioral health competencies more broadly in conjunction with practitioner wisdom and the integrated care research available at the time.

We used a community-based participatory research approach with two collaborating health and mental health organizations to develop and implement the ICRC and SWICCS. We held weekly team meetings with administrators and practitioners from the participating federally qualified health center, a local mental health agency, and faculty and staff from the partnering university's social work program. This group selected the learning domains for the initial development of the ICRC curriculum based upon noted sources. Following the initial year of the ICRC program, we conducted focus groups with students involved with the program to explore the extent to which the training program modules met their needs. Additionally, field supervisors provided their perspectives throughout the year on the relevance and applicability of the individual components of the training model. We refined the curriculum and the SWICCS based on feedback received, additions to the integrated care literature, and needs identified by the program and health center.

Prior to the second year of the ICRC training program (2013–2014), we developed and pilot tested the SWICCS to quantify student growth in knowledge acquired and skills gained through the ICRC curriculum. The SWICCS assesses student learning and skills development across a range of competency domains taught didactically and applied under direct

supervision. The SWICCS reflects curricular changes implemented after the second program year. We administered the SWICCS three consecutive academic years to test its effectiveness in measuring social work students' competence to provide culturally-relevant behavioral health services in a primary care setting.

The SWICCS is designed as a student self-assessment of knowledge and skills and includes two versions. One version, the pre/mid SWICCS, is completed by students at program start and at the end of the first program semester. The other version, the post SWICCS, is completed by students at the conclusion of their participation in the formal ICRC training. The scale contains multiple competencies to assess knowledge and clinical service skills specific to each of the eight domains included in the ICRC.

The SWICCS is composed of 37 items ($\alpha = .91$) scored 1 to 5. The scale has a minimum possible score of 37 and a maximum possible score of 185. On the pre/mid SWICCS students are asked to rate each competency using the five-point scale. Scale options range from *I do not yet have knowledge of....* to *I demonstrate advanced skills in....* Although the five-point scale contains the same anchors, each option is customized according to the unique competency being assessed. On the post SWICCS, students are asked to rate the same competencies using a six-point scale. The sixth option allows students to indicate if they did not have an opportunity to demonstrate competence in the competency area.

Sample

We administered the competency scale to three student cohorts, consisting of 38 Master of Social Work students, over academic years 2014–2015, 2015–2016, and 2016–2017. Similar to social work students in general, the student cohort consisted primarily of White, female students, aged 20–25 years old. Table 1 provides a full description of the study sample. Students

completed the SWICCS three times during their field placement: (1) at training program orientation, (2) at the end of the first academic semester, and (3) at the end of the second semester during their culminating week of placement at the health center. All students were in the advanced year of their master's degree program and were working 24 hours a week at the federally qualified health center locations in one Midwestern urban area, in fulfillment of their field education requirement.

Table 1		
<i>Student Sample Characteristics</i> ^a		
<u>Age</u> ^b	<i>n</i>	<i>%</i>
20–25	31	81.6
26–30	4	10.5
31–35	0	0.0
36–40	1	2.6
41–50	1	2.6
51–60	1	2.6
<u>Gender</u>		
Male	6	15.8
Female	32	84.2
<u>Race/Ethnicity</u>		
Caucasian	33	86.8
African American	4	10.5
Latina	1	2.6
<u>Second Language Fluency</u>		
None	35	92.1
Spanish	3	7.9
<i>Notes.</i> ^a Descriptive data recorded on all students (N = 38). ^b We developed age categories to allow for simplified reporting. Due to the wide range of student ages, a mean was not reflective of the dispersion of students' age.		

Data Collection

Students completed the competency scale as part of their required program documentation; each gave written consent for the scale to be used for research purposes. We

asked students for consent to utilize their SWICCS data for this research at ICRC training orientation. We obtained written consent from all students included in the study sample. We administered the scale online through Qualtrics, an online survey software tool. All items were coded as forced response, resulting in no missing data. Students completed the competency scale either at the health center or remotely on their personal computing device.

At the end of each academic year, social work preceptors also completed a supervisor version of the SWICCS (SWICCS-S) to evaluate each student. Three licensed, independent behavioral health clinicians employed by the integrated care program provided ongoing dedicated training and supervision to the students. Although each student is linked with a specific supervisor throughout the tenure of their field placement, supervision is a team-based, collaborative effort. In the first year of administration, each supervisor independently completed the SWICCS-S for each student. This approach demonstrated high reliability across supervisors; however, given the team-based approach to supervision, the team determined a collaborative score was more appropriate in capturing the collective clinical observations of all supervisors. Thus, in the two subsequent years, supervisors collaboratively discussed each individual student, provided examples to support their evaluation, and worked to achieve consensus on the student's final competency rating.

Analysis

We examined the differences between each administration of the competency scale with students and explored the relationship between a student's post-test competency self-evaluation and the supervisors' evaluation of that student. As the data were not normally distributed, non-parametric data analysis included Friedman tests (Field, 2013) and Wilcoxon signed-ranked tests

(Pallant, 2007) to detect any statistical significance among comparisons. We conducted all analyses using SPSS v. 24.

Results

The Friedman test was significant $\chi^2(2, N = 38) = 74.053, p < .000$, and the Kendall's Coefficient of Concordance of .974 indicated strong differences among the three SWICCS scores (initial SWICCS [Median = 2.108], the mid-term SWICCS [Median = 3.77], and the final SWICCS [Median = 4.38]), suggesting the nine-month ICRC field education and training model resulted in statistically significant changes on the SWICCS (Figure 1). We conducted follow up comparisons using a Wilcoxon signed-rank test. These analyses identified a statistically significant change on the SWICCS from baseline to midterm ($z = -5.374, p < .000$), from midterm to completion ($z = -5.360, p < .000$), and from baseline to completion ($z = -5.374, p < .000$). The increase in mastery of identified practice competencies from baseline to completion is observed with an effect size of $r = -0.87$. Using Cohen's criteria for effect size classification (0.1 = small; 0.3 = medium; 0.5 = large), the reported effect size is large (Cohen, 1988).

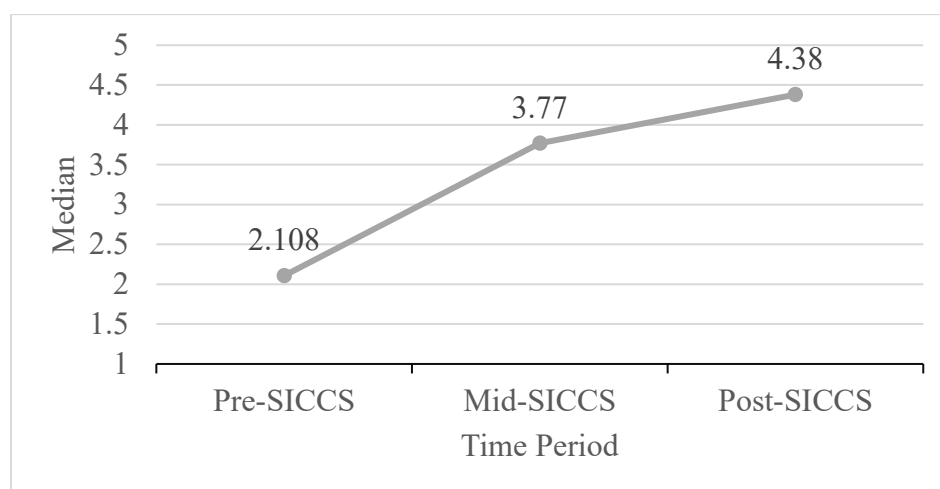


Figure 1. Median SWICCS Score change over 9 months. This figure illustrates an increase in the median competency score for all students from the Pre-SWICCS to the Mid-SWICCS and to the Post-SWICCS.

This effect is stable across the academic year (baseline to midterm $r = -0.62$; midterm to completion $r = -0.62$). The consistent improvement in students' mastery of competencies reflects their progress in skill building as well as the sensitivity of the SWICCS tool to capture incremental change in their skill levels. The inverse relationship between beginning competency

and achieved competency demonstrates that students with lower skill level in the beginning show the greatest change—the most improvement—over time and end with the highest scores on the SWICCS. Hence, student capacity for competency development in the field is maximized by the ICRC training model. Table 2 reflects student scores at three time points and the supervisors' end of semester ratings. Student self-report of competency for each of the eight domains reflects improvement from pre to mid and mid to post. The difference in these distributions is statistically significant.

Table 2						
<i>Median Change by SWICCS Domain</i>						
<u>Domain</u>	<u>Pre</u>	<u>Mdn</u> <u>Mid</u>	<u>Post</u>	<u>r</u>	<u>p</u>	<u>Mdn</u> <u>Supervisor</u>
Integrated Care	2.25	4.50	4.75	-.62	.000	4.75
Assessment & Diagnosis	2.13	4.00	4.50	-.62	.000	4.13
Care Coordination & Intervention Planning	2.00	3.75	4.13	-.62	.000	4.00
Diversity	2.75	4.00	4.50	-.61	.000	4.25
Documentation	2.75	4.00	4.63	-.61	.000	4.25*
Health Care Basics	1.75	3.50	4.25	-.62	.000	4.00*
Evidence-based Behavioral Health Interventions	1.70	3.40	4.20	-.62	.000	4.00*
Technology in a Healthcare Environment	2.00	4.33	5.00	-.61	.000	4.67
<i>Notes.</i> N = 38 students. * Difference between supervisor and student Post SWICCS median is statistically significant at $p < .05$.						

We compared each student's self-rating at completion to the supervisors' collaborative rating of the student at program completion using the SWICCS-S. The SWICCS-S ($\alpha = .938$) is composed of the same 37 items on the SWICCS, but is worded to prompt supervisor assessment of the student on the 37 competencies. In this case, it is not desirable to observe a difference in the ratings of the two scales. Rather, it is preferred to observe how students' self-awareness and self-assessment of their practice abilities align with their supervisors' appraisal of their skills. We

conducted a Wilcoxon signed-rank test to examine the differences among medians of the student SWICCS self-ratings (Median = 4.38) and their supervisors' evaluative ratings using the SWICCS-S (Median = 4.16). Student SWICCS self-ratings were significantly higher than the corresponding supervisors' evaluative rankings $Z = -2.000, p = .046$. The difference in student and supervisor ratings is observed with a medium effect size ($r = -0.32$). Sixty-six percent of the time, students' self-rating was higher than the supervisors' rating.

To further understand the difference in student and supervisor ratings, we conducted a Wilcoxon signed-rank test to compare student rating and supervisor rating on each SWICCS domain. There were statistically significant differences between supervisor and student ratings for three of the SWICCS domains ($p < .05$): Documentation, Health Care Basics, and Evidence-Based Behavioral Health Interventions. There were no statistically significant differences between student and supervisor ratings on the Integrated Care, Assessment and Diagnosis, Care Coordination and Intervention Planning, Diversity, and Technology domains.

Limitations

The study sample is small and encompasses only three cohorts of the ICRC program. While initial findings point to the utility of the SWICCS to measure clinical social worker competence in providing culturally-relevant integrated care, administering the SWICCS with large samples and in other settings would strengthen these findings. In addition, whenever a measure relies on self-report, there is always the possibility that respondents will over or under estimate their ratings. Student self-ratings of competency are likely subject to this phenomenon, as noted by the incongruence amongst supervisor and student ratings. Regardless, adequate data included in the analyses suggest change in student competence over time.

Discussion/Implications

This study aimed to develop and test a measure to assess the progressive development of competencies required for students learning to provide behavioral health services in an integrated health care environment. The Social Work Integrated Care Competency Scale (SWICCS) complements the Integrated and Culturally Relevant Care (ICRC) training curriculum (Davis et al., 2015) implemented with multiple cohorts of students. Overall, the SWICCS demonstrates reliable sensitivity to changes in student and supervisor perceptions of knowledge and skill acquisition.

Although we tested the tool with a small sample, the magnitude of change reflected over time aligns with expectations for students completing a training program such as ICRC. While students tended to rate themselves higher than supervisors at the third completion, supervisor ratings generally confirmed student ratings of their ability to perform the competency. Students would not have yet demonstrated the skills in a formal professional capacity; hence, their higher self-ratings suggest they may be unaware of the difference between ability and mastery.

The differences in student and supervisors' ratings on particular competency domains are not surprising. Diversity, Documentation, Health Care Basics, and Evidence-Based Behavioral Health Interventions are the more challenging areas of knowledge and skills development in behavioral health. In particular, skills related to working with diverse populations in a culturally-responsive manner are often challenging for even the most seasoned professionals. Therefore, the differences between student and supervisors' ratings on these complex domains may not be so much a reflection of the inability of the SWICCS to capture these anomalies accurately, but rather a reflection of the supervisors' collective expertise in understanding the complexity of these skills.

Integrated care models require behavioral health clinicians who are competent in providing services in a primary care setting. These skills differ from those of traditional behavioral health clinicians (O'Donohue, 2009), yet they are critical to the success of integrated care. Using a tool, such as the SWICCS, can support effective and efficient practice as it creates a benchmark for minimum standards of competence. While preliminary findings about the utility of the SWICCS to evaluate students are promising, it is necessary to continue to test the tool with additional samples of students and perhaps professional providers over time. Confidence in the tool's ability to sensitively detect changes in student competency over time will increase as the tool is utilized with more students and behavioral health clinicians.

Various efforts to establish competencies for behavioral health professionals providing integrated care importantly resulted in a comprehensive list of the knowledge and skills needed for effective practice (c.f. APA, 2015; Black, D.R., 2017; de Saxe Zerden et al., 2017; Dobmeyer et al., 2003; Hoge et al., 2005; Hoge et al., 2014; Rishel, 2015). Development of the SWICCS serves to advance the lists of competencies to a level of assessment. The sensitivity and reliability of the SWICCS establishes it as a viable tool to meet an important need in the evaluation of competencies among clinical social work students training in integrated care programs. While this tool was developed as a companion to the ICRC training model, it contains the key competencies necessary for any behavioral health clinician to provide culturally relevant services in an integrated care setting. Thus, it moves the field forward in providing a means to ensure the competencies of behavioral health clinicians working in integrated care setting are well defined and measurable on an ongoing basis.

Clinical social workers constitute the majority of behavioral health providers in the United States (Heisler & Bagalman, 2014) who are increasingly employed in health care settings.

Hence, they need to be prepared to work as part of an interdisciplinary team; interprofessional education is a key element of this training (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013). Indeed, a common reason integrated care efforts fail is a lack of preparedness on the part of the behavioral health clinician to work within a primary care setting (Mauer & Druss, 2009). The SWICCS offers a means to assure clinician readiness to effectively engage in primary care medical settings. The availability of measures to ensure a properly trained behavioral health workforce represent a critical step towards ensuring patients receive the highest quality of care, in turn reducing disparities diverse populations experience in health and behavioral health care.

References

- American Psychological Association. (2015). *Competencies for Psychology Practice in Primary Care*. Retrieved from <http://www.apa.org/ed/resources/competencies-practice.pdf>.
- Andrews, C. M., Darnell, J. S., McBride, T. D., & Gehlert, S. (2013). Social work and the implementation of the Affordable Care Act. *Health & Social Work, 38*(2), 67-71.
- Black, D.R. (2017). Preparing the workforce for integrated healthcare: A systematic review. *Social Work in Health Care, 56*, 914-942.
- Blount, F.A., & Miller, B.F. (2009). Addressing the workforce crisis in Integrated Primary Care, *Journal of Clinical Psychology in Medical Settings, 16*, 13–119. DOI 10.1007/s10880-008-9142-7
- Borowsky, S., Rubenstein, L. V., Meredith, L. S., Camp, P., Jackson-Trice, M., & Wells, K. B. (2000). Who is at risk of nondetection of mental health problems in primary care? . *Journal of General Internal Medicine, 15*, 381-388.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage Publications.
- Brochstein, J.R., Adams, G.L., Tristan, M.P. & Cheney. (1979). Social work and primary health care, *Social Work in Health Care, 5*(1), 71-81, DOI: 10.1300/J010v05n01_08
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.
- Connor, K., Copeland, V. C., Grote, N. K., Koeske, G., Rosen, D., Reynolds III, C. F., & Brown, C. (2010). Mental health treatment seeking among older adults with depression: The impact of stigma and race. *American Journal of Geriatric Psychiatry, 18*, 531-543.

- Council on Social Work Education (2015). *Educational Policy and Accreditation Standards, for Baccalaureate and Master's Social Work Programs*. Retrieved from:
<http://www.cswe.org/File.aspx?id=81660>
- Craig, S. L., Betancourt, I., Muskat, B. (2015). Thinking big, supporting families and enabling coping: The value of social work in patient and family centered health care. *Social Work in Health Care*, 54(5), 422-443.
- Creswell, J. D., Shope, R., Plan Clark, V. L., & Green, D. O. (2006). How interpretive qualitative research extends mixed methods research. *Research in the Schools*, 13(1), 1-11.
- Croft, B., & Parish, S.L. (2013). Care integration in the Patient Protection and Affordable Care Act: Implications for behavioral health. *Administration and Policy in Mental Health and Mental Health Services Research*, 40, 258-263.
- Davis, T.S., Guada, J., Reno, R., Peck, A., Evans, S., & Moskow Sigal, L., & Swenson, S. (2015). Integrated and culturally relevant care: A field education model for social work in primary care. *Social Work in Health Care*, 54, 909-938.
- de Saxe Zerden, L., Lombardi, B.M., Fraser, M.W., Jones, A., & Garcia Rico, Y. (2017). Social work: Integral to interprofessional education and integrated practice. *Journal of Interprofessional Education & Practice*, 10, 67-75.
- DeBonis, J. A., Becker, M. A., Yoo, J., Capobianoc, J., & Salerno, A. (2015). Advancing social work education: Lessons learned from piloting an integrated healthcare curriculum. *Journal of Social Service Research*, 41(5), 594-621.

- Dobmeyer, A. C., Rowan, A. B., Etherage, J. R., & Wilson, R. J. (2003). Training psychology interns in primary behavioral health care. *Professional Psychology: Research and Practice*, 34(6), 586-594.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Thousand Oaks, CA: Sage.
- Fraser, M., Lombardi, B., Wu, S., de Saxe Zerden, L., Richman, E., & Fraher, E. (2016). Social work in integrated primary care: A systematic review. *Health Workforce Policy Brief*, Carolina Health Workforce Research Center, available at <http://www.healthworkforce.unc.edu>
- Gould, P. R., Lee, Y., Berkowitz, S., & Bronstein, L. (2015). Impact of a collaborative interprofessional learning experience upon medical and social work students in geriatric health care. *Journal of Interprofessional Care*, 29(4), 372-373.
- Grantmakers In Health, and Hogg Foundation for Mental Health. (2013, August). *A window of opportunity: Philanthropy's role in eliminating health disparities through integrated health care*. Retrieved from www.gih.org/files/FileDownloads/Eliminating_Health_Disparities_through_Integrated_Health_Care_August_2013.pdf
- Harris M. D., Greaves, F., Patterson, S., Jones, J., Pappas, Y., Majeed, A., & Car, J. (2012). The North West London integrated care pilot: Innovative strategies to improve care coordination for older adults and people with diabetes. *Journal of Ambulatory Care Management*, 35(3), 216-225.
- Hartig, J., Klieme, E. & Leutner, D. (Eds.) (2008). *Assessment of Competencies in Educational Contexts: State of the Art and Future Prospects*. Göttingen: Hogrefe & Huber.

- Heisler, E.J., & Bagalman, E. (2014). *The mental health workforce: A primer* (CRS Report No. R43255). Retrieved from Congressional Research Service, <http://fas.org/sgp/crs/misc/R43255.pdf>
- Hodgins, G., Judd, F., Davis, J. & Fahey, A. (2007). An Integrated Approach to General Practice Mental Health Training: The importance of context, *Australasian Psychiatry*, 15(1), 52-57. DOI: 10.1080/10398560601083019
- Hoge, M.A., Morris, J.A., Daniels, A.S., Stuart, G.W., Huey, L.Y., & Adams, N. (2007). *An action plan for behavioral health workforce development: A framework for discussion*. The Annapolis Coalition on the Behavioral Health Workforce prepared for SAMHSA, U.S. Department of Health and Human Services (DHHS), Contract Number 280-02-0302. Available: <http://www.samhsa.gov/Workforce/Annapolis/WorkforceActionPlan.pdf>
- Hoge M.A., Morris J.A., Laraia M., Pomerantz A., & Farley, T. (2014). *Core Competencies for Integrated Behavioral Health and Primary Care*. Washington, DC: SAMHSA - HRSA Center for Integrated Health Solutions.
- Hoge, M. A., Tondora, J., & Marrelli, A. F. (2005). The fundamentals of workforce competency: Implications for behavioral health. *Administration and Policy in Mental Health*, 32(5/6), 509-531.
- Jones, R., Bhanbhro, S. M., Grant, R., & Hood, R. (2013). The definition and deployment of differential core professional competencies and characteristic in multiprofessional health and social care teams. *Health and Social Care in the Community*, 21(1), 47-58.

- Kocher, R., Emanuel, E.J., & DeParle, N.A. (2010). The Affordable Care Act and the future of the clinical medicine: the opportunities and challenges. *Annals of Internal Medicine*, 153(8), 536-539.
- Linnan, L., & Steckler, A. (2002). Process evaluation for public health interventions and research: An overview. In A. Steckler, & L. Linnan (Eds.), *Process evaluation for public health interventions and research* (pp. 1-23). San Francisco, CA: Jossey-Bass.
- Lukachko, A., & Olfson, M. (2012). Race and the clinical diagnosis of depression in new primary care patients. *General Hospital Psychiatry*, 34, 98-100.
- Lundgren, L., Krull, I. (2014). The Affordable Care Act: New Opportunities for Social Work to Take Leadership in Behavioral Health and Addiction Treatment. *Journal of the Society for Social Work and Research*, 5(4), 415-438.
- Lurie, A. (1977). Social work in health care in the next ten years. *Social Work in Health Care*, 2(4), 419-428.
- Mauer, B. J., & Druss, B. G. (2009). Mind and body reunited: Improving care at the behavioral and primary healthcare interface. *The Journal of Behavioral Health Services & Research*, 37, 529–542. doi:[10.1007/s11414-009-9176-0](https://doi.org/10.1007/s11414-009-9176-0)
- McCabe, H. A., & Sullivan, W. P. (2015). Social work expertise: An overlooked opportunity for cutting-edge system design under the Patient Protection and Affordable Care Act. *Health & Social Work*, 40(3), 155-157.
- Miller, B.F., Talen, M.R., & Patel, K.K. (2013). Chapter 4: Advancing integrated behavioral health and primary care: The critical importance of behavioral health in policy. In M.R. Talen & A. Burke Valeras (Eds.), *Integrated behavioral health in primary care:*

- Evaluating the evidence, identifying the essentials* (pp53-62). New York: Springer Science+Business Media.
- Minkler, M., & Wallerstein, n. (2002). Introduction to community based participatory research. In M. Minkler & N. Wallerstein (Eds.), *Community-based participatory research for health* (pp. 3-26). San Francisco, CA: John Wiley & Sons, Inc.
- O'Donohue, W. T. (2009). Integrated care: Whom to hire and how to train. In L.C. James & W.T. O'Donohue (Eds.), *The primary care toolkit: Practical resources for the integrated behavioral care provider* (pp. 41–51). New York, NY: Springer.
- Pallant, J. (2007). *SPSS Survival Manual 3rd Edition*. New York, NY: McGraw Hill Open University Press.
- Pecukonis, E., Doyle, O., Acquavita, S., Aparicio, E., Gibbons, M., & Vanidestine, T. (2013). Interprofessional leadership training in MCH social work. *Social Work in Health Care*, 52(7), 625-641.
- Peek, C.J. (2013). Integrated Behavioral Health and Primary Care: A common language, In M.R. Talen & A. Burke Valeras (Eds.), *Integrated Behavioral Health in Primary Care - Evaluating the evidence, identifying the essentials* (pp. 9-31). New York: Springer.
- Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). *Interprofessional education: Effects on professional practice and healthcare outcomes* (update). Cochrane Database of Systematic Reviews, 2013(3). Art. No. CD002213. CD002213.pub3.
- Rishel, C. (2015). Establishing a prevention-focused integrative approach to social work practice. *Families in Society: The Journal of Contemporary Social Services*: 96(2), 125-132.

- Rishel, C. & Hartnett, H. (2015). Providing MSW students to provide mental and behavioral health services to military personnel, veterans, and their families in rural settings. *Journal of Social Work Education*, 51(1), S26-S43.
- Robinson, P. J., & Reiter, J. T. (2016). *Behavioral consultation and primary care: A guide to integrating services*. New York, NY: Springer.
- Saldaña, J. (2015). *The coding manual for qualitative researchers* (3rd ed.). Los Angeles, CA: Sage Publications.
- Shavelson R.J. (2010). On the measurement of competency. *Empirical research in vocational education and training*, 2(1), 41-63.
- Shim, R.S., Ye, J., Baltrus, P., Fry-Johnson, Y., Daniels, E., & Rust, G. (2012). Racial/Ethnic disparities, social support, and depression: Examining a social determinant of mental health. *Ethnic Disparities*, 22(1), 15-20.
- Soklaridis, S., Oandasan, I., & Kimptom, S. (2007). Family health teams: Can health professionals learn to work together? *Canadian Family Physician*, 53(5), 1198-1204.
- Solberg, L. I., Crain, A. L., Jaeckels, N., Ohnsorg, K. A., Margolis, K. L., Beck, A., Whitebird, R. R., Rossom, R. C., Crabtree, B. F., & Van de Ven, A. H. (2013). The DIAMOND initiative: implementing collaborative care for depression in 75 care clinics. *Implementation Science*, 8(1), 135-146.
- Stanhope, V., Videka, L., Thorning, H., & McKay, M. (2015). Moving toward integrated health: An opportunity for social work. *Social Work in Health Care*, (54), 383-407.
- Strosahl, K. D. (2005). Training behavioral health and primary care providers for integrated care: A core competencies approach. In W. T. O'Donohue, M. R. Byrd, N. A. Cummings, &

- D. A. Henderson (Eds.), *Behavioral integrative care: Treatments that work in the primary care setting* (pp.15-52). New York, NY: Brunner-Routledge.
- Taylor, L. D., Coffey, D. S., & Kashner, T. M. (2015). Interprofessional education of health professionals: Social workers should lead the way. *Health Social Work, 41*(1), 5-8.
- Thielke, S., Vannoy, S., & Unutzer, J. (2007). Integrating mental health and primary care. *Primary Care: Clinics in Office Practice, 34*, 571–592.
- Unützer, J., Schoenbaum, M., Druss, B. G., & Katon, W. J. (2006). Transforming mental health care at the interface with general medicine: Report for the Presidents Commission. *Psychiatric Services, 57*(1), 37-47.
- Valentijn, P.P., Schempman, S.M., Opheij, W., & Bruijnzeels, M.A. (2013). Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care, *International Journal of Integrated Care, 13*, 1-12.
- Vega, W., Rodriguez, M. A., & Ang, A. (2010). Addressing stigma of depression in Latino primary care patients. *General Hospital Psychiatry, 32*, 182-191.
- Wang, P., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-Month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 629-640.
- Weist, F. C., Ferris, T. G., Gokhale, M., Campbell, E. G., Weissman, J. S., & Blumenthal, D. (2002). Preparedness of internal medicine and family practice residents for treating common conditions. *JAMA, 288*(20), 2609-2614.
- Wolfe, S.M. (2014). The application of Community Psychology practice competencies to reduce health disparities. *American Journal of Community Psychology, 53*(1), 231-234.

Wotring, J., & Stroul, B. (2011). Issue Brief: The intersect of health reform and systems of care for children's behavioral health care. Washington, DC: Georgetown University Center for Child and Human Development, National Technical Center for Children's Mental Health.